MD 45 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION

PROPOSED SIGNS

15/19,16/17 — Freeland RD — D-3(1) (66"x16") DUAL FACED

21/28,24/25 — York RD — D-3(1) (54"x16") DUAL FACED

18 — PUSH BUTTON TO CROSS YORK ROAD — R10-3(1) 9" x 15"

20 — PUSH BUTTON TO CROSS YORK ROAD — R10-3(1) 9" x 15"

22 — SOUTH MARYLAND 45 — M3-3 (24"x12"), M1-5 (24"x24"), M6-1 (21"x15")

23 — NORTH MARYLAND 45 — M3-1 (24"x12"), M1-5 (30"x15"), M1-5 (24"x24"), M6-1 (36"x36"), M6-1(1) (21"x15") (30"x24")

26 — NORTH MARYLAND 45 — M3-1 (24"x12"), M1-5 (24"x24"), M6-1 (21"x15")

27 — SOUTH MARYLAND 45 — M1-5(6) (36"x72")

PROPOSED SIGNALS

1-12 — R, Y, G — 12" LED

13,14 — 16" LED COUNTDOWN PEDESTRIAN SIGNAL

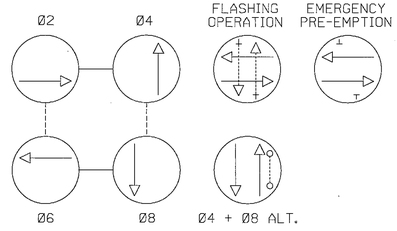
PROPOSED VIDEO DETECTION CAMERA

a,b,c,d

VIDEO DETECTION ZONE

a

NEMA PHASING



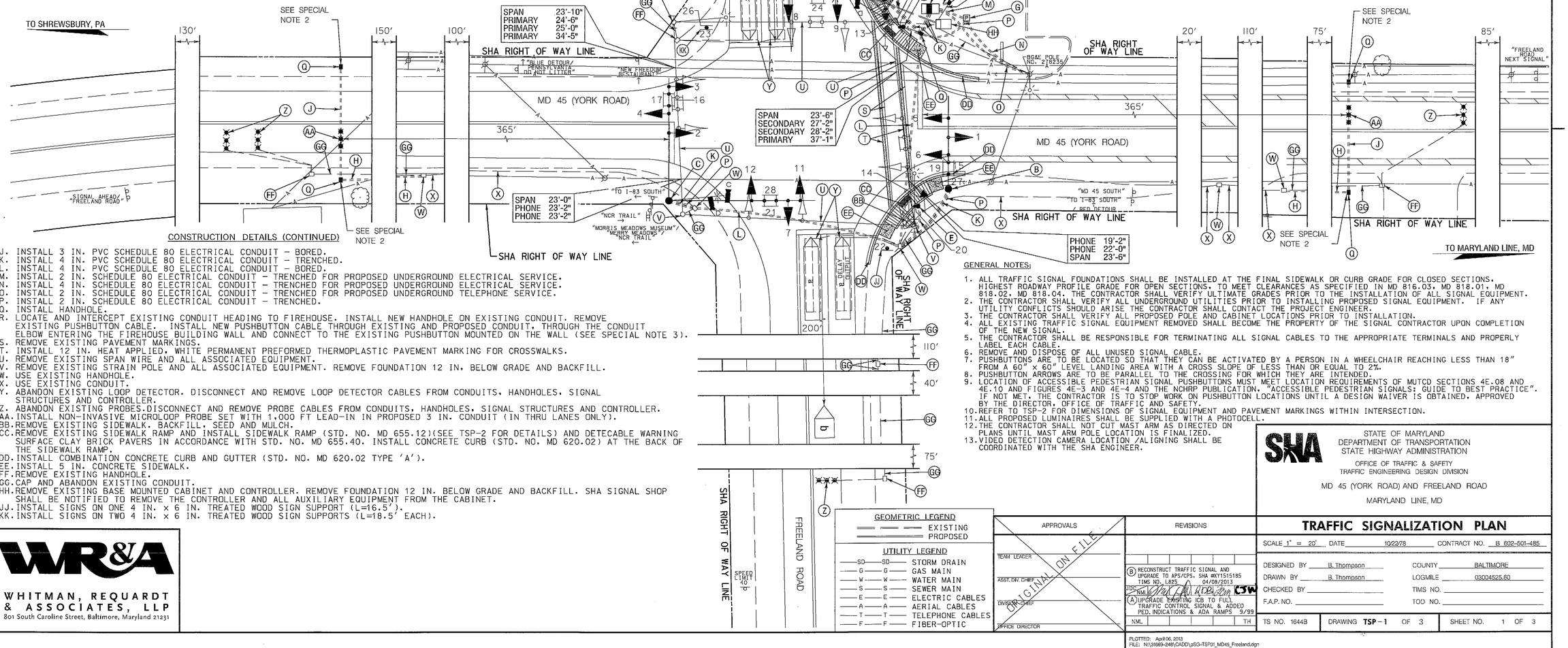
NOTE:
PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.
PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.

SPECIAL NOTES:

1. CONTRACTOR SHALL USE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT TO AVOID DISTURBANCE OF EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL TEST PIT TO DETERMINE EXACT LOCATION AND DEPTH OF UNDERGROUND UTILITIES PRIOR TO INSTALLING SIGNAL EQUIPMENT.
2. INSTALL HANDHOLE WITH LONG DIMENSION PERPENDICULAR TO TRAVEL WAY FOR INSTALLATION OF NON-INVASIVE PROBES. EXTEND CONDUIT A MINIMUM OF 2 IN. AND A MAXIMUM OF 3 IN. INTO HANDHOLE.
3. THE CONTRACTOR SHALL COMPLETE THE SWITCHOVER OF THE FIREHOUSE EMERGENCY PRE-EMPTION PUSHBUTTON AS A LAST ORDER OF WORK WHEN THE SWITCHOVER TO THE NEW SIGNAL IS READY TO BE COMPLETED. DOWNTIME FOR THE PUSHBUTTON OPERATION SHALL LAST NO LONGER THAN 24 HOURS AND SHALL BE COORDINATED WITH GLEN WILHELM OF THE MARYLAND LINE VOLUNTEER FIRE COMPANY AT 410-887-1932 AT LEAST TWO WEEKS PRIOR.
4. THE CONTRACTOR SHALL INSTALL SIDEWALK RAMPS AND SIDEWALKS AFTER PROPOSED SIGNAL EQUIPMENT IS OPERATING AND EXISTING SIGNAL POLES AND FOUNDATIONS HAVE BEEN REMOVED.

CONSTRUCTION DETAILS

A. INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH 50 FT. MAST ARM WITH TRAFFIC SIGNAL HEADS, SIGNS, COUNTDOWN PEDESTRIAN SIGNAL HEAD, 20 FT. LIGHTING ARM WITH LED LUMINAIRE AND OVERHEAD VIDEO DETECTION CAMERAS ON MAST ARM. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE ELECTRICAL CONDUIT BENDS IN POLE BASE).
B. INSTALL CONCRETE FOUNDATION WITH A 16.5 FT. (15'-0" T) STEEL POLE WITH 38 FT. MAST ARM WITH TRAFFIC SIGNAL HEADS AND SIGNS. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE ELECTRICAL CONDUIT BENDS IN POLE BASE).
C. INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH TWIN MAST ARMS (60 FT./ 50 FT.) WITH TRAFFIC SIGNAL HEADS, SIGNS, 20 FT. LIGHTING ARM WITH LED LUMINAIRE AND OVERHEAD VIDEO DETECTION CAMERAS ON MAST ARMS. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE ELECTRICAL CONDUIT BENDS IN POLE BASE).
D. INSTALL CONCRETE FOUNDATION WITH 5 FT. STEEL PEDESTAL POLE WITH MODIFIED BREAKAWAY BASE STD. NO. 801.01-01, AUDIBLE TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS YORK ROAD"). (INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
E. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH MODIFIED BREAKAWAY BASE STD. NO. 801.01-01, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS YORK ROAD"). (INSTALL 1-2 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
F. INSTALL A NEMA SIZE "S" BASE MOUNTED CABINET AND CONTROLLER. (INSTALL 3-2 IN. AND 2-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN CABINET BASE).
G. INSTALL EMBEDDED METERED SERVICE PEDESTAL WITH 2-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE CONDUIT BENDS IN PEDESTAL BASE.
H. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.



CONSTRUCTION DETAILS (CONTINUED)

J. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED.
K. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
L. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED.
M. INSTALL 2 IN. SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE.
N. INSTALL 4 IN. SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE.
O. INSTALL 2 IN. SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND TELEPHONE SERVICE.
P. INSTALL 2 IN. SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
Q. INSTALL HANDHOLE.
R. LOCATE AND INTERCEPT EXISTING CONDUIT HEADING TO FIREHOUSE. INSTALL NEW HANDHOLE ON EXISTING CONDUIT. REMOVE EXISTING PUSHBUTTON CABLE. INSTALL NEW PUSHBUTTON CABLE THROUGH EXISTING AND PROPOSED CONDUIT, THROUGH THE CONDUIT ELBOW ENTERING THE FIREHOUSE BUILDING WALL AND CONNECT TO THE EXISTING PUSHBUTTON MOUNTED ON THE WALL (SEE SPECIAL NOTE 3).
S. REMOVE EXISTING PAVEMENT MARKINGS.
T. INSTALL 12 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALKS.
U. REMOVE EXISTING SPAN WIRE AND ALL ASSOCIATED EQUIPMENT.
V. REMOVE EXISTING STRAIN POLE AND ALL ASSOCIATED EQUIPMENT. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.
W. USE EXISTING HANDHOLE.
X. USE EXISTING CONDUIT.
Y. ABANDON EXISTING LOOP DETECTOR. DISCONNECT AND REMOVE LOOP DETECTOR CABLES FROM CONDUITS, HANDHOLES, SIGNAL STRUCTURES AND CONTROLLER.
Z. ABANDON EXISTING PROBES. DISCONNECT AND REMOVE PROBE CABLES FROM CONDUITS, HANDHOLES, SIGNAL STRUCTURES AND CONTROLLER.
AA. INSTALL NON-INVASIVE MICROLOOP PROBE SET WITH 1,000 FT LEAD-IN IN PROPOSED 3 IN. CONDUIT (IN THRU LANES ONLY).
BB. REMOVE EXISTING SIDEWALK. BACKFILL, SEED AND MULCH.
CC. REMOVE EXISTING SIDEWALK RAMP AND INSTALL SIDEWALK RAMP (STD. NO. MD 655.12)(SEE TSP-2 FOR DETAILS) AND DETECABLE WARNING SURFACE CLAY BRICK PAVERS IN ACCORDANCE WITH STD. NO. MD 655.40. INSTALL CONCRETE CURB (STD. NO. MD 620.02) AT THE BACK OF THE SIDEWALK RAMP.
DD. INSTALL COMBINATION CONCRETE CURB AND GUTTER (STD. NO. MD 620.02 TYPE 'A').
EE. INSTALL 5 IN. CONCRETE SIDEWALK.
FF. REMOVE EXISTING HANDHOLE.
GG. CAP AND ABANDON EXISTING CONDUIT.
HH. REMOVE EXISTING BASE MOUNTED CABINET AND CONTROLLER. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL. SHA SIGNAL SHOP SHALL BE NOTIFIED TO REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CABINET.
JJ. INSTALL SIGNS ON ONE 4 IN. x 6 IN. TREATED WOOD SIGN SUPPORT (L=16.5').
KK. INSTALL SIGNS ON TWO 4 IN. x 6 IN. TREATED WOOD SIGN SUPPORTS (L=18.5' EACH).

GENERAL NOTES:

1. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS. HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS. TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
2. THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
3. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
4. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE NEW SIGNAL.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
6. REMOVE AND DISPOSE OF ALL UNUSED SIGNAL CABLE.
7. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" x 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
8. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
9. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SECTIONS 4E.08 AND 4E.10 AND FIGURES 4E-3 AND 4E-4 AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE". IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
10. REFER TO TSP-2 FOR DIMENSIONS OF SIGNAL EQUIPMENT AND PAVEMENT MARKINGS WITHIN INTERSECTION.
11. ALL PROPOSED LUMINAIRES SHALL BE SUPPLIED WITH A PHOTOCELL.
12. THE CONTRACTOR SHALL NOT CUT MAST ARM AS DIRECTED ON PLANS UNTIL MAST ARM POLE LOCATION IS FINALIZED.
13. VIDEO DETECTION CAMERA LOCATION /ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.

GEOMETRIC LEGEND

EXISTING
PROPOSED

UTILITY LEGEND

SD—SD STORM DRAIN
G—G GAS MAIN
W—W WATER MAIN
S—S SEWER MAIN
E—E ELECTRIC CABLES
A—A AERIAL CABLES
T—T TELEPHONE CABLES
F—F FIBER-OPTIC

WR&A
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BY: jcheng

APPROVALS

TEAM LEADER — ORIGINAL ON FILE
ASST. DIV. CHIEF
DIVISION CHIEF
OFFICE DIRECTOR

REVISIONS

(B) RECONSTRUCT TRAFFIC SIGNAL AND UPGRADE TO APS/CPS, SHA #KY1515185 TIMS NO. 1825 04/08/2013 JDC NML
(A) UPGRADE EXISTING ICB TO FULL TRAFFIC CONTROL SIGNAL & ADDED PED. INDICATIONS & ADA RAMPS 9/99 NML TH

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 45 (YORK ROAD) AND FREELAND ROAD

MARYLAND LINE, MD

TRAFFIC SIGNALIZATION PLAN

SCALE 1" = 20' DATE 10/22/08 CONTRACT NO. B 602-501-485

DESIGNED BY B. Thompson COUNTY BALTIMORE
DRAWN BY B. Thompson LOGMILE 03004525.60
CHECKED BY TIMS NO.
F.A.P. NO. TOD NO.

TS NO. 1644B | DRAWING TSP-1 OF 3 | SHEET NO. 1 OF 3

PLOTTED: April 06, 2013
FILE: N:\31699-248\CADD\pSG-TSP01_MD45_Freeland.dgn